BEST Winery: An Integrated Benchmarking and Energy and Water Management Tool

Funded by the California Energy Commission (CEC)

Developed with Fetzer Vineyards

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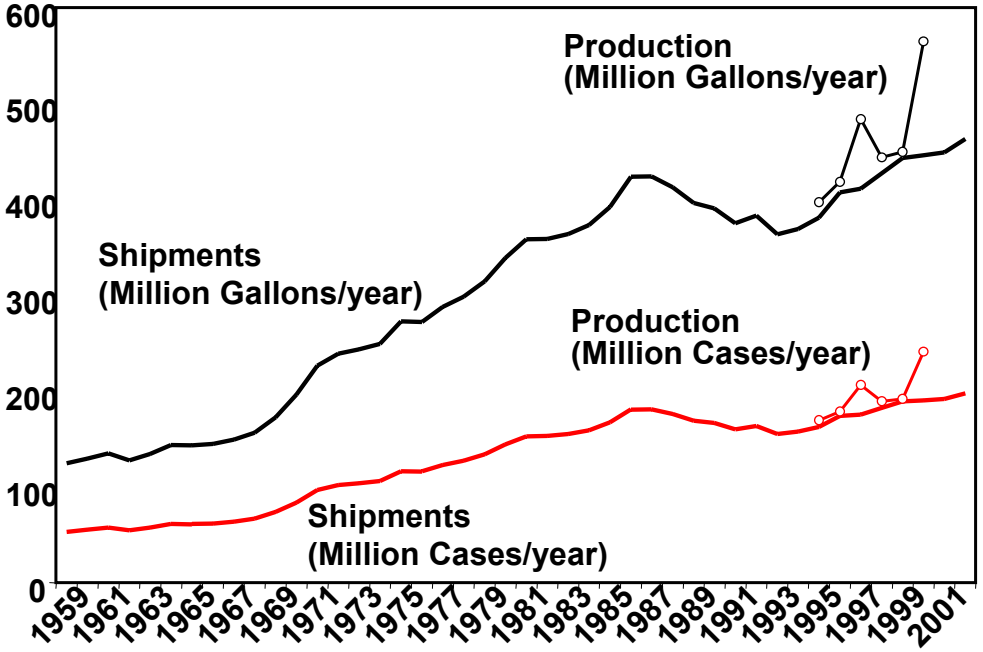
Wine Industry

- The U.S. is the 4th largest wine producer in the world (after France, Italy and Spain)

- California produces roughly 90% of all wine made in the U.S.

- Wine production in California has tripled in the last 4 decades
  - In 2000, California produced 565 million gallons of wine
  - 92% of U.S. production



California Wine Shipments

Wine Industry in California

- Wine industry important economic sector in California
  - Nearly 400 wineries (of which 140 over 20 employees)
  - Provides 145,000 jobs directly and indirectly
  - Shipments over $5.5 Billion, making it the second largest food industry
  - Produces 200 Million cases/year
- Wineries are second largest electricity consumer in the food industry, consuming over 400 GWh/year
- Also consume some fuel oil, propane and 23 therms of natural gas per year

BEST Winery

- **Creating a benchmarking and water and energy assessment tool for California wineries**
- **Funded by California Energy Commission – Food Industry Energy Research (FIER) program**
- **Partnership of LBNL and Fetzer Vineyards, a leading company in sustainable practices in the wine industry**

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Why BEST?

- **Why Benchmarking?**
  - Companies often have the perception that they are highly energy-and water-efficient
  - Benchmarking provides a tool to test this perception using accepted benchmark values for technology
  - Benchmarking addresses the specific product and feedstock mix at the plant
  - Experience with benchmarking programs worldwide has shown increased attention for energy-efficiency and performance
- **Why an integrated energy- and water-assessment tool?**
  - Allows low-cost and easy evaluation of energy-and water efficiency improvement potential and provides a menu of opportunities
  - Reduces transaction costs for information collection, preliminary evaluation, and strategic energy management

Tool Features

- **Annual energy & water consumption input sheet**
  - Energy use, by fuel and electricity
  - Water use
  - Production characteristics and main variables
- **Benchmark entire plant to industry "best practice"**
  - Energy use & water use
  - Gives an EEI and a WEI for the industry winery
- **Selection menu of energy-and water-efficiency options**
  - Both Cross-cutting and Process-related
  - Assessment of winery energy- and water-efficiency potential
  - Evaluation of costs of implementation and savings
- **Once options for implementation are selected, the tool calculates *potential* EEI and WEI for plant**

Where we are

Over to model demo…

Next Steps

Step	Timing
Finish beta-version of model	Now
Test the beta-version of the model –Fetzer Vineyards –Benzinger Family Winery –Consultant - Gopal Shanker of Wine Business Strategies	Winter 2004/05 (Fetzer is testing now)
Adapt model based on recommendations from above	Winter 2004/05
Roll-out model	Early Spring 2005
Training and workshops to distribute model and provide instructions –3 workshops in 3 regions in California	Spring 2005

For Further Information

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